
Globalization in Growing Financial Markets as a Threat to the Financial Security of the Global Economy

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Abstract:

Purpose: The main aim of this article is to spread awareness regarding the scale and dynamics of the development of particular sectors of the financial market and financial turnovers, which threaten the stability of the economy.

Design/Methodology/Approach: To achieve that aim, the following analyses were conducted. A comparative analysis of current and historical data of the Bank for International Settlements (BIS) and the World Federation of Exchanges (WFE) in terms of the number of assets allocated in selected sectors of financial markets as well as daily turnover. A content analysis for occurrences confirming growing financial imbalances and frequently occurring in the recent years deep crashes on key financial markets which are a threat to the stability of the global financial economy. Simultaneously, one aspect pointed out was the instance of the growing concentration of assets among individual entities and countries.

Findings: The current position of the global economy is far from stable. It is a result of the uncontrolled explosion of development of financial markets and virtually generated profits which, by having been transferred to the world of the real economy, caused detachment of prices from their economic foundation in the recent decades which, in turn, contributed to the global economy's sensitivity to shocks as well as created extremely violent and deep crises with increased frequency.

Practical Implications: Financial markets pose significant risks regarding a lack of control over the financier's world and threats to the global economy's financial stability and future civilization development rate.

Originality/value: More and more capital on global markets significantly decreased its cost and increased acceptance of investment risk and underestimation, leading to its extremization – risk-taking phenomenon. It prompts even more debt, lowers business entities' vigilance, demotivates saving, reforms, and rationalizes actions among governments, banks, businesses, and citizens. It discourages share issuing and encourages increasing debt to finance business development – this can lead to the destruction of company values. Moreover, it reduces the power of economic policy.

Keywords: Financial security, financial imbalances, investment risk, risk-taking, haven.

JEL classification: F31, F32, F34, F38, F42, G15, G18.

Paper Type: Research study.

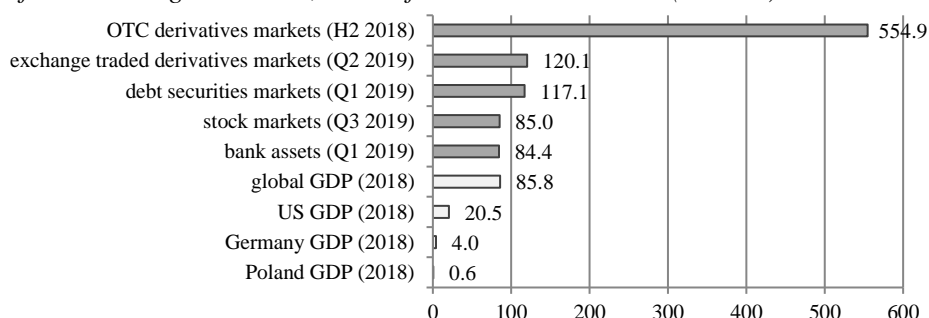
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1. Introduction to Financial Markets' Wealth

In the times of globalization of financial markets, their incredible financial wealth, and development of IT technology is important to realize the scale of threats for the stability of financial markets, businesses, countries, and the very functioning of the global economy as a result of the growing daily flow of capital. According to the official data, the amount of capital located on global financial markets currently reaches 1 quadrillion USD (1015) however, it is common knowledge that this amount is higher. The world of financial markets is connected to organized crime and the unwillingness of some parties to reveal the capital source or paying taxes. According to the data gathered by BIS which has been, over the years, conducting analyses of selected parts of global financial markets and the WFE, which aggregates global data from public stock markets, the total amount of assets in main parts of global financial markets corresponds to at least 11 times the global GDP, i.e., 11 years of work performed by 7.6 billion of people (2018, World Bank, 2019a) (Figure 1).

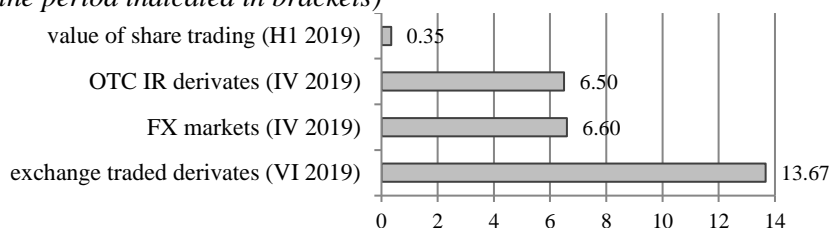
Figure 1. *The value of selected parts of global financial markets compared to the value of the annual global GDP, GDP of the USA and Poland (USD tn)*



Source: BIS, 2019a, 2019b, 2019c, 2019d, WFE, 2019, World Bank, 2019a.

Without a doubt, no institution, group of entities, or country is as powerful as global financiers meaning the group of financial entities managing hundreds of trillions of USD invested in financial assets, thus controlling the direction in which investment is led globally and being able to destabilize the financial situation of markets, currency exchange, national economies, the global economy in a short period of time which was confirmed by the financial crisis of 2008 and coronavirus outbreak at the beginning of 2020. Financial markets are wealthy enough to influence the politics of countries in order to set legal solutions that are in favor of certain investors. This is confirmed by the amount of daily turnover on global financial markets, which exceeds the majority of countries' annual GDP several dozen or even several hundred times (Figure 2). Daily turnover on derivative markets, currency markets, and stock markets reached 27tn of USD in the first half of 2019, thus, it even exceeds the USA's annual GDP.

Figure 2. Average daily turnover in selected sectors of global financial markets (USD tn in the period indicated in brackets)



Source: BIS, 2019a, 2019b, 2019d BIS, WFE, 2019.

It should not come as a surprise to anyone that the changes happening on specific markets and, in turn, exchange rates, especially on the same day, are not necessarily a result of economic, political, psychological, or speculative factors but are a change of previous investment strategy or a notion of single financial institutions. We need to learn to live with those as they will be happening more often along with the growing wealth of global financiers, increasing daily turnover on financial markets, and accepted level of investment risk.

This is the result of changes in the last decades in operations of financial markets connected with changes in macroprudential regulations and increasingly lower investment profits relying on interest rates, which not only encourage, but even forced to take bigger investment risk in order to gain the planned profits (Rajan, 2005; Adrian and Shin, 2009; Gambacorta, 2009; Farhi and Tirole, 2009a) and additionally cause the classic moral hazard problem (Altunbas, Gambacorta, Marques and Ibanez, 2010). Observed decade by decade increasingly lower interest rates globally caused significant changes in the tendency of economic entities (including financial institutions) to take the risk, their perception of risk, level of risk in an investment portfolio, pricing of assets, conditions and cost of new capital (Borio and Zhu, 2008).

Undoubtedly, transition into the world of negative interest rates will intensify the above phenomena. That is why more and more economists are in favor of the policy called leaning against the wind, i.e., for maintaining interest rates on a higher level than it would stem from economic analyses in order to lower the tendency of economic entities to take risks (Mishkin, 2011; White, 2006; Boivin, Lane and Meh, 2010; Cecchetti *et al.*, 2000; Borio and Lowe, 2002; Goodhart and Hofmann, 2000; Farhi and Tirole, 2009b) and also for the quicker restoring of the interest rates to their previous or even higher level to discourage or to prevent the risk-taking (Agur and Demertzis, 2010; Redo, 2013).

2. Examples of Steep Changes in the Pricing of Financial Values

One of the most recent examples of this is the steep decrease unexplained by analytics (for over 1000 USD – from 9414 to 8421 USD) of Bitcoin on September 24th, 2019,

when it lost 10.5% its value in a matter of one hour (Figure 3). It is worth reminding that in the first half of December 2017, Bitcoin was priced at 20 thousand USD.

Figure 3. Steep decrease of the Bitcoin rate on September 24th, 2019 (against USD) and the Bitcoin value against US Dollar in the years 2013-2019 (on the small chart)



Source: Coinmarketcap.com.

A month earlier (on August 12th, 2019), the publication of results of presidential primaries in Argentina, where the current president received the lowest number of votes, caused a strong enough outflow of capital from the Buenos Aires stock exchange that the Merval index noted a 38% drop on a single day and peso lost 1/3 of its value compared to USD (from 45 to 60 USD) (Figure 4).

Figure 4. Steep decrease in the value of Argentinian ARS towards USD (the left chart) and Merval stock index on August 12th, 2019 (the right chart)



Source: Xe.com and investing.com.

Due to their smaller size and the shallowness of their financial market, smaller and weaker countries are at risk because of the abrupt capital; however, it must be noted that bigger economies with well-developed financial markets must not feel safe. Financial institutions nowadays manage such significant financial assets that they can threaten the stability of major financial centers, international currencies, and, as a result, economies of the countries involved.

This is proven by the steep increase in the Swiss franc's value on “black” Thursday of January 15th, 2015 – the event so well remembered not only by those whose

mortgages were denominated in the Swiss franc. That is when the Swiss National Bank, after 4 years, stopped defending the currency from appreciation. As a result of CHF's release, the currency's position was strengthened against other currencies – of around 17% to USD (from 1.02 to 0.85 CHF) and EUR (from 1.20 to 0.99 CHF) (Figure 5). On that day, the Swiss franc increased its value in Poland from 3.545 to 4.342 (i.e., by 22.5%).

Figure 5. Steep appreciation of CHF towards USD (the left chart) and EUR (the right chart) in January 2015



Source: Xe.com.

The mortgage installments of mortgages taken in CHF (which were popular not only in Poland at the time) increased on that day by 1/5 and, what was even more severe, the remaining amount of a given mortgage increased by 1/5 as well. In practice, it often meant an increased mortgage by tens or even hundreds of thousands of PLN. Even a day before the steep appreciation of CHF, the mortgage of 100 thousand PLN could have been paid ahead of the scheduled payment with the amount of 354.5 thousand PLN, whereas the day after the event, 434.2 thousand PLN (almost 80 thousand PLN more) was needed to settle the commitment.

Another, even better example of lack of resistance towards the outflow of capital among not only strong but also big countries is the capital outflow in the United Kingdom, which happened on June 24th, 2016, after partial results of the Brexit referendum with a slight majority of pro-Brexit votes were released. As a result, GBP's rate lost 9% in value towards USD, i.e., it dropped on one day from 0.67 to 0.73 for 1 USD (Figure 6).

It must be noted that a famous financier George Soros contributed to the steep depreciation of GBP almost 3 decades ago (in the second half of September 1992), which supposedly earned him over a billion USD in just a matter of days. The GBP rate lost over the course of 2 weeks in 1/5 towards USD, and between September and November of 1992, it decreased in value towards USD by 33% (from 0.50 to 0.66 GBP for 1 USD (Figure 7).

Figure 6. Steep depreciation of GBP against USD on June 24th, 2016



Source: Xe.com.

Figure 7. Steep depreciation of GBP against USD in September 1992



Source: Fxtop.com.

Nowadays, financial markets and individual financial institutions have incomparably higher capital and can, without too much effort and in a short period of time, lead to a market crash or their overestimation and creation of speculative bubbles and, as a result of their burst to financial destabilization of banks, businesses, countries and the entire global economy. The capital that has been accumulated since the 1980s at a growing speed and in a much more aggressive way in the world of virtual financial markets led to the accumulation of so much of that capital that the presence of a new investment opportunity, trend, or the need for a particular type of investment now leads to much faster creation of the speculative bubble.

Confirmation for that can be found in the unprecedented increase of Bitcoin's value in the years 2013-2017 up to the level of almost 20 thousand USD or in the sevenfold increase of gold's price (from 256 USD per ounce in 2001 to 1900 USD in 2012), or the appreciation of CHF to USD by almost half (by 45%) around the time of the financial crisis in 2008 (from over 1.3 CHF for 1 USD at the beginning of 2006 to a little over 0.7 CHF for USD in 2011 which in the autumn of 2011 led SNB to intervene in the Swiss franc's exchange rate over the course of 4 years, which prevented its

excessive appreciation in a situation of a significant increase in interest in investing capital in CHF) – Figure 8.

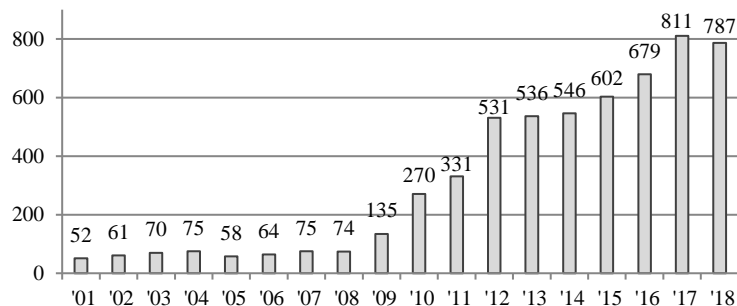
Figure 8. Gold's price increase up to 2012 (in USD per ounce; the left chart) and CHF's appreciation against USD in the years 2005-2011 (the right chart)



Source: Fxtop.com and goldprice.org, 2019.

A result of the growing interest in the Swiss franc was the emergence of another significant financial instability: the almost elevenfold increase in reserve assets of the Swiss National Bank in almost a decade – up to USD 811bn at the end of 2017 (see Figure 9), which amounts to almost 120% of Switzerland's GDP.

Figure 9. Increased level of Swiss reserve assets (USD bn).



Source: Self-reported data on the basis of World Bank, 2019b.

As a result, Switzerland became one of the main owners of reserve assets in the world – both nominally (4th place) and about GDP (3rd place) – see Table 1 – along with a full spectrum of global financial ties and threats coming from those (Redo, Siemiątkowski, 2017). In comparison, the USA's reserve assets were at 2.2% of the country's GDP at the end of 2018 and in the United Kingdom at 6.1% of GDP (World Bank, 2019a, 2019b).

3. Concentration of Assets in the Hands of Single Entities

Over the course of a few decades, the accumulation of reserve assets as an effect of the increasing export inflows resulting from globalization and liberalization of global trade, growing consumption, better access to loans, growing inflow of foreign

investment capital (especially in the dynamically developing emerging economies), multiplied to unimaginable size as a result of the development explosion of financial markets in the last quarter of a century, forced to fiercer competition, more active search of higher return rates and accepting a higher level of investment risk, of which main aim was to strengthen the external solvency of economies, their stabilization, and increased credibility, led to the high concentration of huge capital resources in selected types of assets and currencies in the hands of a small number of countries.

These could be regarded as sources of potential speculative bubbles and a significantly strong weapon in finance, economy, and politics. Even the change of strategy rules in managing reserve assets by those countries could impose a severe threat to the international monetary system's stability, financial markets, solvency, and thus functioning and growth of the entire global economy (Redo, 2017a). According to the IMF's data, global foreign exchange reserves were calculated at 11.4bn USD at the end of 2018 and accounted for 13.3% of the world's GDP. Nowadays, they are 8.5-times higher than a quarter of a century ago, and 73% of all reserve assets is owned by only 10 countries: China, Japan, Switzerland, Saudi Arabia, Russia, Taiwan, US, Hong Kong, Korea, and India – Table 1.

Table 1. *Countries with the highest reserve assets at the end of 2018 nominally (in bn USD, left side of the table) and in relation to GDP* (right side of the table)*

USD bn			% GDP		
1.	China	3 168.2	1.	Libya	176.6
2.	Japan	1 270.5	2.	Hong Kong SAR, China	117.0
3.	Switzerland	787.0	3.	Switzerland	111.6
4.	Saudi Arabia	509.5	4.	Lebanon	92.5
5.	Russian Federation	468.6	5.	Singapore	80.4
6.	Taiwan	461.8	6.	Taiwan	78.4
7.	United States	449.9	7.	Saudi Arabia	65.1
8.	Hong Kong SAR, China	424.6	8.	Czech Republic	58.1
9.	Korea, Rep.	403.1	9.	Algeria	48.4
10.	India	399.2	10.	Thailand	40.7
11.	Brazil	374.7	11.	Israel	31.2
12.	Singapore	292.7	12.	Iraq	28.6
13.	Thailand	205.6	13.	Malaysia	28.6
14.	Germany	198.0	14.	Kuwait	28.4
15.	Mexico	176.4	15.	Russian Federation	28.3
16.	United Kingdom	172.7	16.	Peru	27.1
17.	France	166.5	17.	Japan	25.6
18.	Italy	152.4	18.	Korea, Rep.	24.9
19.	Czech Republic	142.5	19.	United Arab Emirates	24.0
20.	Indonesia	120.7	20.	Philippines	23.9
21.	Poland	117.0	21.	China	23.3
22.	Israel	115.3	22.	Vietnam	22.6
23.	Malaysia	101.5	23.	Denmark	20.2
24.	United Arab Emirates	99.5	24.	Brazil	20.1
25.	Turkey	93.0	25.	Poland	20.0

Note: * the analysis includes countries with reserve assets of more than 40 bn USD in value

Source: Self-reported data on the basis of World Bank, 2019b (data for Taiwan: ceicdata.com)

This data does not show the full spectrum of the issue. The reserve assets that some countries have been much higher than it can be concluded based on the World Bank's official data. These countries have been moving some of the currency reserves to sovereign wealth funds (SWF) to generate those assets' higher profitability.

According to the SWF's data, accumulated assets of 86 sovereign wealth funds are calculated at 8.1bn of USD (2019), and 82% of this amount is in the hands of 13 largest SWFs who have assets of a few hundred billion USD (each of them) and manage over a half of global exchange reserves (6.6 USD bn from 11.4 USD bn) – see table 2.

Table 2. *Total assets of the largest sovereign wealth funds (USD bn, 2019)*

rank	SWF	Total Assets	Region	Country
1.	Norway Government Pension Fund Global	1 098.8	Europe	Norway
2.	China Investment Corporation	940.6	Asia	China
3.	Abu Dhabi Investment Authority	696.7	Middle East	UAE
4.	Kuwait Investment Authority	592.0	Middle East	Kuwait
5.	Hong Kong Monetary Authority Investment Portfolio	509.4	Asia	Hong Kong
6.	GIC Private Limited	440.0	Asia	Singapore
7.	National Council for Social Security Fund	437.9	Asia	China
8.	SAFE Investment Company	417.8	Asia	China
9.	Temasek Holdings	375.4	Asia	Singapore
10.	Qatar Investment Authority	328.0	Middle East	Qatar
11.	Public Investment Fund	320.0	Middle East	Saudi Arabia
12.	Investment Corporation of Dubai	239.4	Middle East	UAE
13.	Mubadala Investment Company	228.9	Middle East	UAE
the assets of the 13 largest SWFs (USD bn)		6 624.9		
total assets of all 86 SWFs (USD bn)		8 101.0		
the assets of the 13 largest SWFs in relations to total assets of all 86 SWFs (%)		81.8%		

Source: *Sovereign Wealth Fund Institute, 2019.*

It must be noted that almost 80% of SWFs' assets are held by countries of the Asia-Pacific and Middle East region, demonstrating the diminishing dominance of Western capital in the global economy. As the financial crisis of 2008 shows, sovereign wealth funds can be a valuable source of stability for the global economy (Urban, 2012). They are also a chance for the investment horizon's lengthening in the growing short-termism in financial markets. However, the growing economic and political power of the states with sovereign wealth funds in the international arena has raised concerns about the threat that sovereign wealth funds pose to the stability of markets, currencies, economies, and hence to the stability and development of the global economy (Rozanov, 2005). These concerns are increased by the limited transparency of many sovereign wealth funds and the fact that some of them come from states with other than democratic governance systems and other approaches to the state's economic functions. That is why they can be the roots of the severe global financial, economic, or political crises in the future (Redo, 2017b).

4. Concentration of Assets in the Hands of Private Financial Institution

It must be noted that the assets accumulated by private financial institutions are even bigger. According to Standard & Poor Global's data, the assets accumulated by 100 major global banks are estimated at around 91tn of USD, which is 106% of global GDP. 26 of these institutions have assets estimated at over 1tn of USD, and the assets of the last bank on the list of the 100 major banks are estimated at 238bn of USD, i.e., 40% of Poland's GDP (Table 3).

Table 3. *The world's largest banks (by assets, USD bn, 2018)*

Rank	Profile	Total Assets	Region	Country
1.	Industrial & Commercial Bank of China	4 027	Asia	China
2.	China Construction Bank Corp.	3 377	Asia	China
3.	Agricultural Bank of China	3 287	Asia	China
4.	Bank of China	3 092	Asia	China
5.	Mitsubishi UFJ Financial Group Inc.	2 813	Asia	Japan
6.	JP Morgan Chase & Co.	2 623	America	US
7.	HSBC Holdings PLC	2 558	Europe	UK
8.	Bank of America Corp.	2 355	America	US
9.	BNP Paribas	2 337	Europe	France
10.	Crédit Agricole Group	2 124	Europe	France
the assets of the 10 largest banks in bn of USD		28 592		
the assets of the 10 largest banks in percent of global GDP		33.3%		
the assets of the 100 largest banks in bn of USD		90 715		
the assets of the 100 largest banks in percent of global GDP		105.6%		

Source: Garrido, Chaudhry, 2019.

It must be noted that the assets of every major bank are comparable to Germany's GDP (USD 3.9tn) or the United Kingdom's GDP (USD 2.9tn) and are 4.8 times higher than the annual national income in Poland (USD 586bn, World Bank, 2019a). Accumulated assets of 10 major banks are calculated at USD 28.6tn and are higher than the USA's GDP (USD 20.5tn) almost by half; they also constitute 1/3 of global GDP – Table 3.

Among 100 major banks, China is in the lead with the number of its institutions – 19. Their assets are calculated at USD 24tn. The USA is in the 2nd place with 12 institutions (accumulated assets of almost USD 13tn), Japan takes the 3rd place with 8 institutions (with assets of almost USD 11tn).

Table 4. *Countries among 100 major global banks with the strongest representation (as of the end of 2018)*

Rank	Country	Number of banks	Total assets	
			USD tn	% of the 100 biggest banks' assets
1.	China	19	24.16	26.6%
2.	US	12	12.85	14.2%
3.	Japan	8	10.84	11.9%
4.	France	6	8.67	9.6%

5.	UK	6	6.90	7.6%
6.	Canada	5	3.91	4.3%
7.	Spain	5	3.38	3.7%
8.	Germany	5	3.20	3.5%
9.	Australia	4	2.59	2.9%
10.	South Korea	6	2.13	2.3%
11.	Brazil	4	1.43	1.6%
the banks from above 11 countries		80	80.05	88.2%
the banks from other countries		20	10.67	11.8%
		100	90.72	

Source: Own calculations on the basis of S&P (Garrido, Chaudhry, 2019).

France (6 institutions with accumulated assets of almost USD 9tn) and the United Kingdom (6 institutions with accumulated assets of almost USD 7tn) also have strong representation.

The dynamic increase of Chinese financial institutions' assets over the last decade is worth noting; when it comes to assets, 4 major banks are from China, whereas in 2007, the list included banks from Western countries only – see Table 5 and Table 3.

Table 5. *The world's biggest banks as of the end of 2007 (USD bn)*

Rank	Name	Total Assets	Country
1.	Royal Bank of Scotland Group	3 807	United Kingdom
2.	Deutsche Bank	2 974	Germany
3.	BNP Paribas	2 494	France
4.	Barclays	2 459	United Kingdom
5.	HSBC	2 354	United Kingdom
6.	Crédit Agricole	2 268	France
7.	Citi	2 188	United States
8.	UBS	2 019	Switzerland
9.	Bank of America	1 716	United States
10.	Société Générale	1 578	France
11.	JPMorgane Chase	1 562	United States
12.	Mizuho Financial group*	1 507	Japan
13.	UniCredit	1 504	Italy
14.	ING	1 463	Netherlands
15.	Santander	1 344	Spain
16.	Bank of Tokyo-Mitsubishi UFJ*	1 337	Japan
17.	HBOS	1 336	United Kingdom
18.	Credit Suisse Group	1 209	Switzerland
19.	Industrial & Commercial Bank of China	1 189	China
20.	Fortis	1 129	Belgium
21.	Goldman Sachs Group	1 120	United States
22.	Sumitomo Mitsui Financial Group*	1 081	Japan
23.	Morgan Stanley	1 045	United States
24.	Merril Lynch	1 020	United States
25.	Commerzbank	908	Germany

Note: * as of the end of March 2008

Source: Global Finance, 2009.

Among 50 major banks in the world (according to Global Finance), there were only 4 institutions from China – and these four are now the biggest banks in the world when

it comes to their assets (see table 5 and table 3). Industrial & Commercial Bank of China, ranked as the 19th, was the biggest one (with assets of USD 1.189tn), and the 3 others were ranked as 26th, 31st, and 32nd (with assets USD 903bn, 828bn and 820bn respectively). Thus, the economic and financial potential of China must not be omitted, as well as India's and many other countries from Southeast Asia; this potential not only comes from the dynamic growth of the region but also from its population, which indicates that the days of the dominance of Western capital and Western financial institutions are numbered. It is worth noting that 3 decades ago (in 1988), eight major banks assets-wise (and 10 major banks deposit-wise) were found in Japan – Table 6.

Table 6. *The world's biggest banks in 1988 (by assets and deposits, USD bn)*

Rank per assets	Bank	Nation	Assets	Deposits	Rank per deposits
1.	Dai-Ichi Kangyo Bank*	Japan	352.6	280.3	1.
2.	Sumitomo Bank*	Japan	334.8	265.3	2.
3.	Fuji Bank*	Japan	327.9	256.0	3.
4.	Mitsubishi Bank*	Japan	317.9	248.6	4.
5.	Sanwa Bank*	Japan	307.5	244.1	5.
6.	Industrial Bank of Japan* **	Japan	249.6	214.4	6.
7.	Norinchukin Bank**+	Japan	215.9	197.2	7.
8.	Tokai Bank*	Japan	213.6	170.3	9.
9.	Credit Agricole	France	210.6	143.7	18.
10.	Citicorp	U.S.	203.8	124.0	25.
11.	Mitsubishi Trust* ++	Japan	196.3	176.2	8.
12.	Banque Nationale	France	197.0	160.5	10.
13.	Mitsui Bank*	Japan	196.2	151.1	14.
14.	Barclays	England	189.3	155.8	13.
15.	Sumitomo Trust* ** ++	Japan	180.7	160.5	10.
16.	Credit Lyonnais	France	178.9	150.6	15.
17.	National Westminster Bank	England	178.4	144.9	17.
18.	Mitsui Trust* **	Japan	173.2	149.8	16.
19.	Deutsche Bank	W. Germany	171.5	156.0	12.
20.	Long-Term Credit	Japan	166.9	143.1	19.
21.	Taiyo Kobe Bank* ** ++	Japan	166.6	130.4	20.
22.	Bank of Tokyo*	Japan	162.6	128.0	21.
23.	Yasuda Trust* ** ++	Japan	147.2	125.5	22.
24.	Societe Generale	France	145.7	124.7	24.
25.	Daiwa Bank* ** ++	Japan	144.5	125.1	23.

* As of March 31, 1988 ** Figures don't include all 50%-owned subsidiaries. + As of Sept. 30, 1988. ++ Not adjusted for all mergers and acquisitions. Source: Institutional Investor
Source: Frantz, 1989.

Among 25 of the world's biggest financial institutions, only 1 bank was from the US, and 17 from Japan (see Table 6). The burst of the speculative bubble in 1990 in Japan and the crisis that resulted from that enabled American and Western-European expansion in financial institutions, whereas the financial crisis of 2008 opened the door for Asian financial institutions.

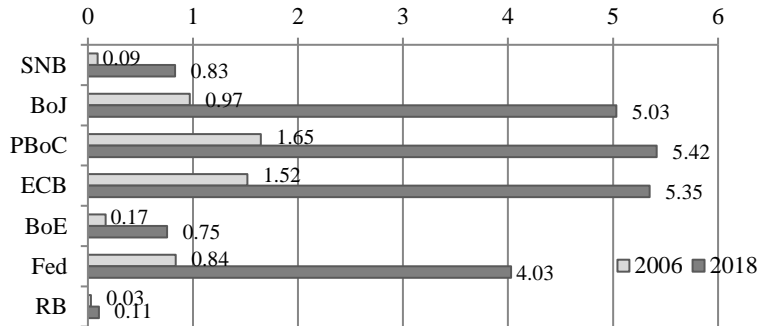
It must be noted that there are changes happening in the distribution of power in the world of financial markets and the financial potential of dynamically developing Southeast Asia; one must also keep in mind the threats coming from the concentration of multibillion assets in the hands of private entities and the scale of financial interdependence between them, asset markets, currency rates and economies in the times of globalization of financial markets and, most importantly, from the results of the possible domino effect – especially in terms of weaker, less economically stable developing countries with much more shallow financial markets strongly depending on external financial sources, much more exposed to and vulnerable to flow of capital and the sudden stop phenomenon (Caballero and Panageas, 2004; Caballero and Panageas, 2005; Cordella and Yeyati, 2005; García and Soto, 2004; Aizenman and Lee, 2005; Jeanne and Rancière, 2006; Aizenman and Marion, 2002; Jeanne and Wyplosz, 2001, Redo, 2017a).

5. Additional Money Printing by Major Central Banks

It must be added that the risk connected to the excessive amount of capital located on financial markets and its increased flow globally in search of profits will significantly increase in the upcoming years. This is mainly a fault of the major central banks, which added fuel in the last decade by printing additional money in the already wealthy global financial system. We are now speaking of assets with additional value of a few dozen trillions of dollars in central banking systems subjected to the multiplier effect. The program of purchasing assets for virtual printing of additional money called quantitative easing (QE) was (or has been) conducted by 5 central banks of which economies provide 52% of global GDP: Federal Reserve System (Fed, in the years 2014-2016 and now from October 2019), European Central Bank (ECB, in the years 2015-2018 and now from November 2019), Bank of Japan (BoJ, since 2010), Bank of England (BoE, in the years 2009-2012) and Riksbank (RB, since 2015) – Figure 10.

As a result, there was an unprecedented increase in central bank assets of major global economies. BoJ's assets increased in the years 2006-2018 by USD 4.1tn (i.e., by 419%), ECB's assets by USD 3.8tn (i.e., by 252%), Fed's assets by USD 3.2tn (i.e., by 383%) and Riksbank's assets by USD 76bn (i.e., by 260%). Central banks purchase financial instruments from banks to exchange virtually printed money, which improves the financial liquidity of these institutions and allows for further expansion. It also maintains market prices of purchased instruments at a level above that which would otherwise occur and, because of the scale of printing money (quantitative easing), adds to their overestimation.

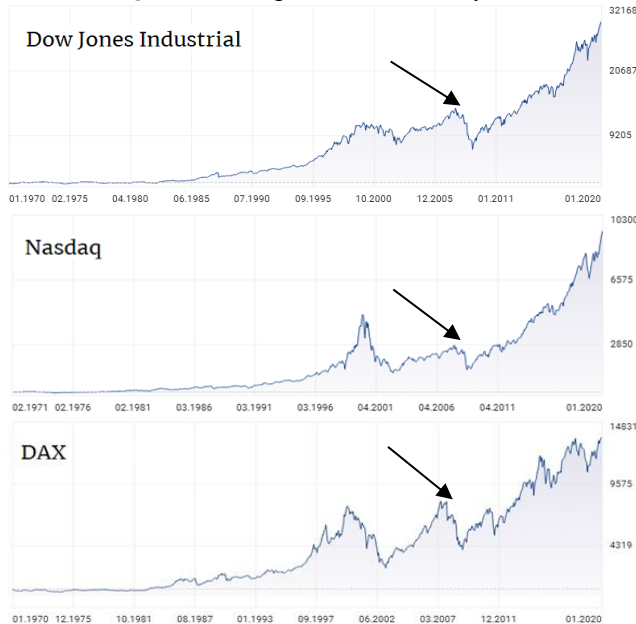
Figure 10. *The major central banks' assets in 2006 and 2018 (USD tn)*



Source: own calculations on the basis of data extracted from *tradingeconomics.com* (Central Bank Balance Sheet) and *xe.com* (Current and Historic Rate Tables).

As a result, the prices of other financial instruments increase, which leads to the creation of new, bigger speculative bubbles. It is visible when it comes to prices on the major stock exchange, where in recent years indexes were at 2-3 times higher levels than in the times of bull market on global financial markets around 2007 (see Figure 11); it is also visible in the context of already mentioned noble metals or cryptocurrencies (Figure 8 and Figure 3).

Figure 11. *DJIA, NASDAQ and DAX quotations in the years 1970-2020*



Source: *Money.pl*.

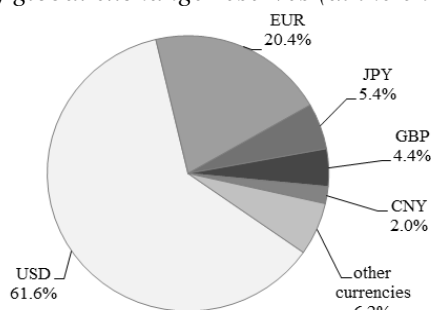
It is not difficult to assume that the results of the burst of a current speculative bubble on financial markets can be much more severe than those in 2008. Such high prices of shares in the context of the maintained a lower growth rate of the global economy

confirm that the bubble will burst, but the question of when that will happen remains unanswered. More relevantly, one should ask if and how the world will rise from this event. The issue is found in the lack of ideas for the revival of the global economic situation and lack of tools for an economic policy due to lack of power of fiscal policy among even the biggest economies as a result of a significant increase in public debt and lack of power of monetary policy as a result of lowered interest rates to a shallow and even negative level in response to the crisis of 2008. As a result, economic policy tools lost their power and ability to revive real economic processes. It is confirmed by Japan's economic stagnation, which has lasted for over 3 decades now, from which the discretionary economic policy could not defend itself despite having maintained ultra-low interest rates for the quarter of the century (around 0 percent), despite a significant increase in public expenditure (which led to the accumulation of the highest public debt among developed countries – 238% of GDP; 2018, tradingeconomics.com), despite the manipulation of yen's exchange rate for the improvement of the export's competitiveness (since 2001) and additional printing of money by BoJ (quantitative easing) for the first time in the years 2001-2006 and then again since 2010.

Two other central banks must be mentioned here as well – those of Switzerland and China, which have increased significantly over the last years. As previously mentioned, in the case of the Swiss central bank, it was a direct effect of intensive inflow of capital to Switzerland and the increased demand for CHF after the financial crisis of 2008. The increased interest in CHF led to the 9-time increase in SNB's assets in the years 2006-2018 – from USD 92bn to USD 831bn, so for a value of USD 739bn – Figure 10 (and accumulation of huge exchange reserves). In China's case, the process of increased inflow of foreign currencies has been taking place for over a quarter of the century. It is connected to the accelerated economic growth of China and dynamic growth of export of Chinese products, which led to the accumulation of a significant amount of international currency reserves (mainly USD) by the Chinese central bank (People Bank of China – PBoC), creation of wealthy SWFs and a significant increase in PBoC's assets. In the same years, 2006-2018, PBoC's assets increased by almost USD 3.8tn, i.e., by 229% (Figure 10).

Aside from the risk related to multiplier effects of money from central banks, economies of which are responsible for 68.5% of global GDP, continuously increasing debt of global economy and risk related to increasing debt of less credible entities, increased risk tolerance, bigger and more frequent future speculative bubbles, one must note another obvious issue – the actual value of those international currencies as the significant amount of global wealth is stored in those currencies, as well as 93.8% of exchange reserves (Figure 12) which determine the value of local currencies.

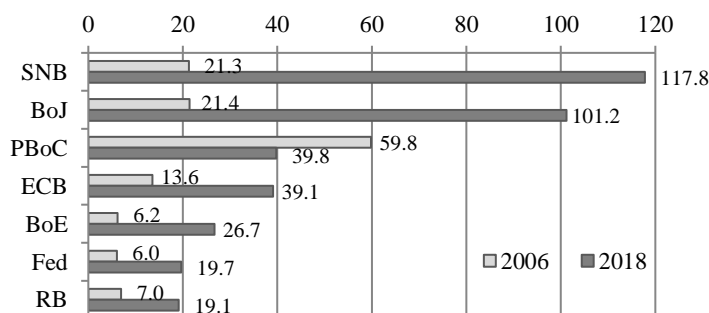
Figure 12. *Structure of global exchange reserves (at the end of June 2019)*



Source: *Self reported data on the basis of IMF, 2019.*

This questions the value of many other currencies worldwide, which increases the fluctuation risk and steep depreciation of local currencies and the sensitivity of economies – especially those highly dependent on external financing. One must also consider the scale of the problem. Figure 13 compares the number of assets of the above described central banks about GDP in 2006 and 2018.

Figure 13. *Comparison of major central banks' assets in 2006 and 2018 (in % of GDP)*



Source: *Own calculations on the basis of data extracted from tradingeconomics.com (Central Bank Balance Sheet, GDP) and xe.com (Current and Historic Rate Tables).*

The current level of assets in Switzerland and Japan's central banks is especially interesting (Figure 13). The assets of SNB and BoJ accounted for 101 and 118% of GDP respectively at the end of 2018, and in the analyzed years 2006-2018, these increased 5.5 times in the case of SNB and almost 5 times in the case of BoJ. The ECB's assets increased 3 times during that time from 13.6% of GDP of the Eurozone to 39.1% of GDP. In 2006, the American Fed, Swedish Riksbank, and Bank of England assets were relatively the lowest among the mentioned central banks. These accounted for 6-7% of GDP at the time. In the case of Fed and Riksbank, they are 3 times higher and account for almost 20% of GDP, and in the case of BoE, almost 4 times higher and account for 26.7% of GDP – Figure 13. This data confirms real concerns for the actual value of major international currencies and their stability in the future and the value of all assets denominated in these currencies, thus the bulk of

the global wealth. As these currencies and assets denominated in them determine the value of many other currencies and assets, the above-presented data question the actual value of practically all global wealth. Without a doubt, the above mentioned major international currencies have significantly less "coverage" in GDP than 12 years ago. Therefore, their current market value is merely the faith of humanity, which helps us believe that our possessions are actually worth something.

6. Summary and Concluding Comments

Without a doubt, the growth and globalization of financial markets and their increasing wealth help accelerate global economic development. However, it must be noted that they pose significant risks regarding a lack of control over the financier's world and threats to the global economy's financial stability and the future rate of civilization development. More and more capital on global markets caused a significant decrease in its cost but, at the same time, enforced increased acceptance of investment risk and its underestimation, leading to its extremization – risk taking phenomenon. Easy access and cheap capital prompt even more debt, which raises concerns about the debt level globally in the next decades and risks resulting from such debt – the growing risk of insolvency and decreased development of most indebted entities, including the global economy (Redo, 2018a).

Affordable and easily accessible capital lowers business entities' vigilance – both debtors and investors – and demotivates saving, reforms, and rationalization of actions among governments, banks, businesses, and citizens. This, in the case of growing debt, increases the risk of the sudden stop phenomenon, especially in less credible countries with a strong dependence on external financing. The above phenomena and risks connected to them are increased by the policy of ultra-low interest rates and additional money printing conducted by major central banks (quantitative easing), which have been done for over a decade now – ever since the financial crisis of 2008. It raises concerns over the future development of businesses and the decreased importance of stock markets, which have stopped mirroring businesses or countries' actual economic state. Such low-interest rates and QE programs discourage from share issuing and encourage increasing debt to finance business development – this can lead to the destruction of company values (Chirinko, Schaller, 2011; Jensen, 2004; Redo, 2018b).

A lower number of IPO and a decreasing number of companies on stock markets can already be observed. Such affordable and easily accessible capital increases risk tolerance and enables survival for weaker entities. It thus contributes to maintaining ineffective solutions, prevents market clearance and more effective resource allocation, and limits future economic growth.

Finally, the decreased power in economic policy must be pointed out as the issue of limited efficiency of its tools – both in the decreased power in fiscal policy (in the event of significant increase of public debt after the crisis of 2008 which is encouraged by ultra-low interest rates which have been maintained for over a decade now) and in

monetary policy (in the event of approaching the 0% mark). In the case of some countries, it is the issue of the inability of these policies. This creates rightful concerns whether these countries will be able to effectively deal with the negative effects of the growing flow of capital and how and if they will recover after probably even more severe crises. Although this issue concerns all countries, it is especially important in developing countries that heavily depend on external financing, as they are naturally more sensitive to shocks (Redo, 2017c). It must be stressed that also the exit from monetary policy stimulus by major central banks might lead to capital outflows from emerging economies and steep corrections in the estimation of assets, currencies, and cost of capital (Redo, 2017d; IMF, 2013).

Inflowing capital enables economic development and debt rollover; in emerging economies, it also increases the probability of government insolvency, the occurrence of bank crises, currency crises, and inflation. It is also connected to procyclical fiscal policy and attempts to avoid currency appreciation, which increases the vulnerability and sensitivity of given economies towards the flow of capital (Reinhart, 2008). It is especially those countries that should, in the times of globalization of wealthy financial markets, maintain neutral and stabilizing (anti-cyclical) macroeconomic policy (sound macroeconomic policy) and start generating savings in times of prosperity (Kaminsky, Reinhart and Végh, 2004; Redo, 2019), start strengthening the institutional background to increase economic resistance to shocks (Fratzscher, 2012).

The research results show that the cause of many crises in developing countries can be found in excessive debt as a result of procyclical economic policy – see the analysis results in 104 countries in the years 1960-2003 conducted by Kaminsky, Reinhart, Végh (2004). The governments are at fault here, as they feel the rush of high public spending in good economic situations when capital on international markets is easily accessible and affordable. In times of crisis, they cut public spending to reduce the budget deficit, accompanied by increased market cost of capital, especially in less credible countries. As the research results indicate, the factors that attract capital (pull factors) and are connected with hard economic indicators specific for a given economy (macroeconomic fundamentals), state of local entities and economic policy play an important role; in some periods, like in the years 2009-2010, they are regarded as significant factors of shifting the capital from well-developed economies to emerging economies (Fratzscher, 2012).

Finally, it must be added that, as proven by research, actual and financial openness of economy does not influence at all or a relatively low rate the sensitivity and vulnerability of economies to the flow of capital, which means that the idea of limiting or controlling the capital flow for the better strengthening of economic stability and limiting the influence of external shocks might be a completely useless tool Fratzscher, 2012. Thus, the only proper actions seem to be those that will permanently strengthen those factors that attract capital, the so-called pull factors related to the improvement of economic fundamentals. It must be noted that credibility, stability, and financial predictability and, even more broadly, economic and political

predictability, as well as adjustment to international standards, are necessary conditions (but not sufficient) to determine stable inflow of foreign investment capital, high and stable level of engagement in the national economy and easy access to thereof.

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